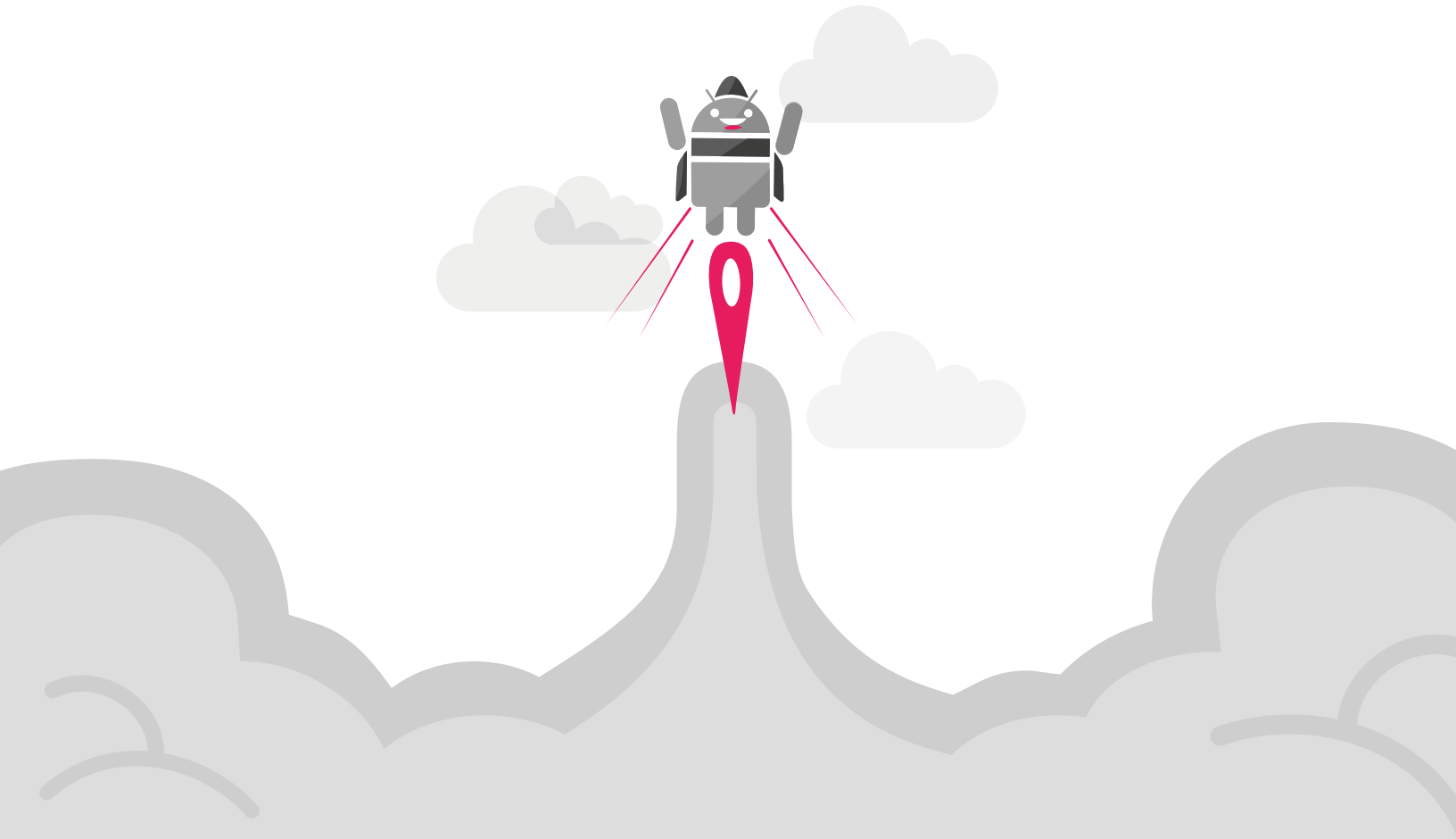
GENYMOTION

User guide

Version 2.5.0 | June 18th, 2015



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Overview

Genymotion is an Android emulator which comprises a complete set of sensors and features in order to interact with a virtual Android environment. With Genymotion, you can test your Android applications on a wide range of virtual devices for development, test and demonstration purposes.

Genymotion is fast, simple to install and powerful thanks to user-friendly sensor widgets and interaction features. It is available for Windows, Mac OS X and Linux operating systems.

This user guide will take you through Genymotion download and installation steps and will help you get familiar with the interface so that you can make full use of Genymotion resources and have a fully operational application.

In this user guide, the following instructional icons are used:

Notes, tips or additional information.

Situations that could cause performance issues or data losses.

Follow the simple installation process, start one of the Android virtual devices and enjoy playing with your application!

Requirements

This section chapter lists the prerequisites for an optimal use of Genymotion.

Operating system

Genymotion is compatible with the following operating systems:

- Microsoft Windows Vista, 7, 8/8.1 (32 or 64 bits);
- Mac OS X 10.8 or above;
- Linux Ubuntu 12.04 (Precise Pangolin) or above;
- Linux Debian 7 (Wheezy).

Genymotion cannot be run from a virtual machine. Indeed, it needs a direct access to the hardware in order to provide OpenGL acceleration. Running Genymotion from a virtual machine prevents it to directly access the hardware components. Therefore, Genymotion is incompatible when installed from VMWare, Parallels, Hyper-V or VirtualPC.

Hardware

Genymotion implies that you have the following hardware on your computer:

- OpenGL 2.0 capable video card, with an up-to-date driver;
- VT-x or AMD-V capable CPU, enabled in BIOS settings;
- RAM memory: at least 2GB;
- Screen resolution greater than 1024 x 768 pixels;
- Free space on hard disk: at least 100MB.

A minimum of 2GB of free space is required to deploy a virtual device. You might need more than 8GB depending on your use of the virtual devices and the applications you have installed.

Software

To run Genymotion virtual devices, you must install Oracle VM VirtualBox 4.1 or above. However, for performance reasons, we recommend using version 4.3.12.

For more information, please refer to section chapter *Installing Genymotion*.

Web browser

For installation, updates and services provided by the Genymotion website, one of the following web browsers is required:

- Internet Explorer: version 10 or above;
- Mozilla Firefox: version 3.0 or above;
- Google Chrome: version 2.0 or above;
- Safari: version 4.0 or above.

Installing Genymotion

Genymotion operation relies on the use of Oracle VM VirtualBox in the background. This enables virtualizing Android operating systems. If you do not already have Oracle VM VirtualBox installed on your computer, you will be asked to do so prior to installing Genymotion.

> ***If you already have Oracle VM VirtualBox installed, note that versions below 4.1.1 are not compatible with Genymotion. For performance reasons, we recommend using version 4.3.12.***

To install Genymotion on your computer, follow the steps corresponding to your operating system.

Windows

To download Genymotion for Windows:

1. Go to the *Genymotion download* *Genymotion download* page.
   From this page, you can:
   - download the ready-to-run Genymotion installer for Windows (recommended).
     This package includes Oracle VM VirtualBox installer.
   - download the Windows 32/64-bit package.
     In this case, you must first download and install **VirtualBox for Windows hosts** from the *Download VirtualBox* page.

     > ***When installing VirtualBox, in the Custom setup window, make sure VirtualBox Networking is enabled.***

2. Save and run the `.exe` file.
3. Select the setup language and click **OK**. By default, the Genymotion language corresponds to your system language.
   The Genymotion setup wizard opens.
4. Click **Next**.
5. Select the destination folder by clicking **Browse**.
   The default destination folder is `C:\Program Files\Genymobile\Genymotion`.
6. Click **Next**.
7. Select the start menu folder by clicking **Browse** or check **Don't create a Start menu folder** and click **Next**.
8. Select whether or not to create a desktop icon and click **Next**.

9. Click **Install** and **Finish**.

Genymotion installer may not run properly on Windows Vista. If so:
1. Click **Start > Run.**
2. Enter `cmd.exe` ***and click*** **OK.**
3. In the command prompt, start Genymotion installer package by entering its full path: `%USERPROFILE%\Downloads\<Genymotion installer path>`.

Mac OS X

To download Genymotion for Mac OS X:

1. Download and install **VirtualBox for OS X hosts** from the *Download VirtualBox* page.

   When installing VirtualBox, in the Custom setup window, make sure VirtualBox Networking is enabled.

2. When finished, reboot.
3. Go to the *Genymotion downloadGenymotion download* page.
4. Download the Mac OS X 64-bit package.
5. Open the `.dmg` file.
6. Drag and drop Genymotion and Genymotion Shell to the **Applications** directory.

Linux

Almost every GNU/Linux system comes with an installer package for Oracle VM VirtualBox.

1. Browse for the Oracle VM VirtualBox installer in your directories.
   If you do not have the installer or if you need to install a specific version, download and install **VirtualBox for Linux hosts** from the *Download VirtualBox* page.

   When installing VirtualBox, in the Custom setup window, make sure VirtualBox Networking is enabled.

2. Go to the *Genymotion downloadGenymotion download* page.
3. Download the Linux package corresponding to your system.
4. Run the following commands:

```
chmod +x <Genymotion installer path>/genymotion-<version>_
<arch>.bin
cd <Genymotion installer path>
./genymotion-<version>_<arch>.bin -d <Genymotion installer path>
```

5. Run Genymotion using the following command:

```
cd <Genymotion installer path>
./genymotion
```

Make sure that the `dkms` package is installed and that it compiles VirtualBox kernel modules each time a new kernel update is available.
To do so, run `sudo /etc/init.d/vboxdrv status`. You should get the message "VirtualBox kernel modules (vboxdrv, vboxnetflt, vboxnetadp, vboxpci) are loaded". If not, force VirtualBox kernel modules compilation by running `sudo /etc/init.d/vboxdrv setup` .
Make also sure that you are part of the `vboxusers` group. If not, run `sudo usermod -a -G vboxusers <login>`.

License

This chapter details the license registration and validation steps.

> ***To register your license key, you must have a valid Genymotion account. To create your account, please visit the Account creation page.***

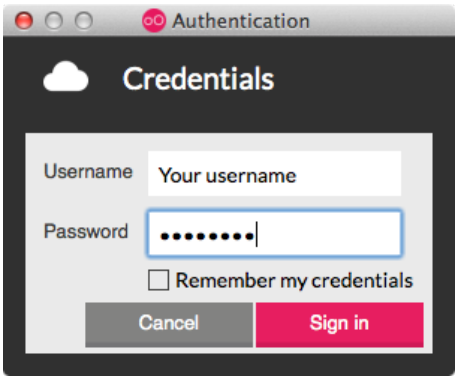
Registering the license key

To register your Genymotion license key:

1. Start Genymotion in one of the following ways depending on your operating system:
   - **Windows**: Click from your desktop.
   - **Mac OS X**: Click from the **Applications** directory.
   - **Linux**: Run `<Genymotion installer path>/genymotion`.
2. Click or **Ctrl + A**.
   The **About Genymotion** window opens:

3. Copy and paste your license key in the **License key** field and click **Register**.
   If you are not already logged, enter your username and password in the **Credentials** window

and click **Sign in**:



If you have any problems registering your license key, please contact us via the *SupportSupport* page.

Validating the license

To validate your license, you need to be connected to the Internet. The Genymotion application automatically connects to your Genymotion account. If your license key is valid, your application will be fully unlocked and all corresponding features will be available.

If Genymotion cannot connect to your account for several days, the license switches to the free version, until the next connection of the Genymotion application to your account. This ensures nobody else uses your license.

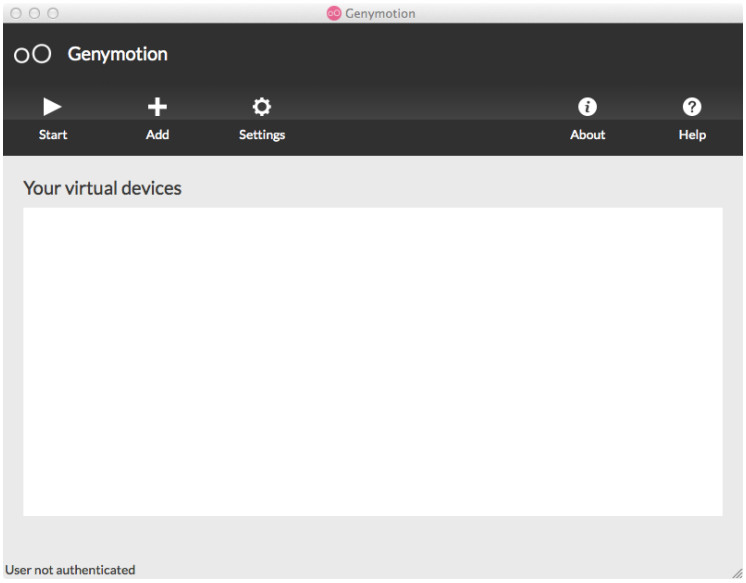
When your license is about to expire, Genymotion prompts you to sign in to your account.

Getting Started

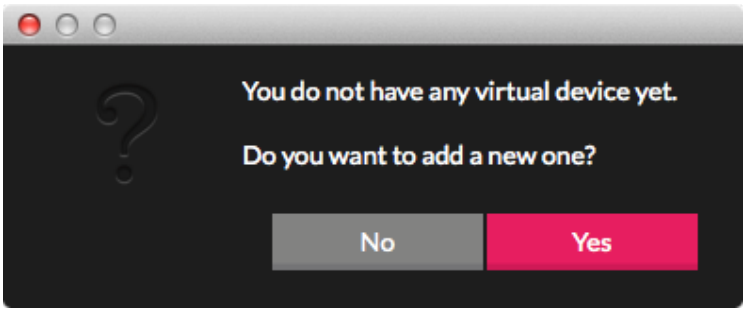
To start using Genymotion and test your Android application, follow the steps below:

1. Start Genymotion in one of the following ways depending on your operating system:
   - **Windows**: Click from your desktop.
   - **Mac OS X**: Click from the **Applications** directory.
   - **Linux**: Run `<Genymotion installer path>/genymotion`.

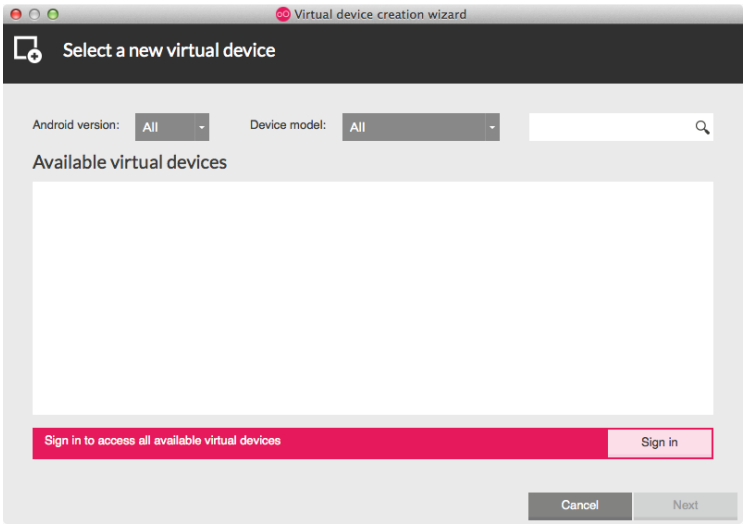
   The Genymotion main window opens:



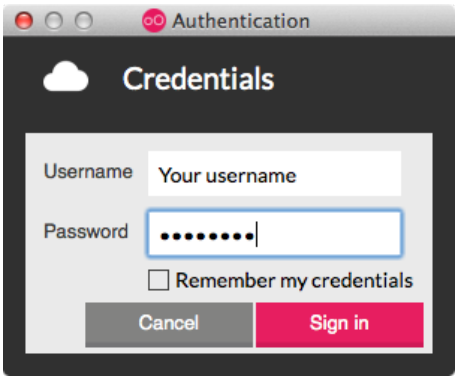
2. In the following window, click **Yes**:



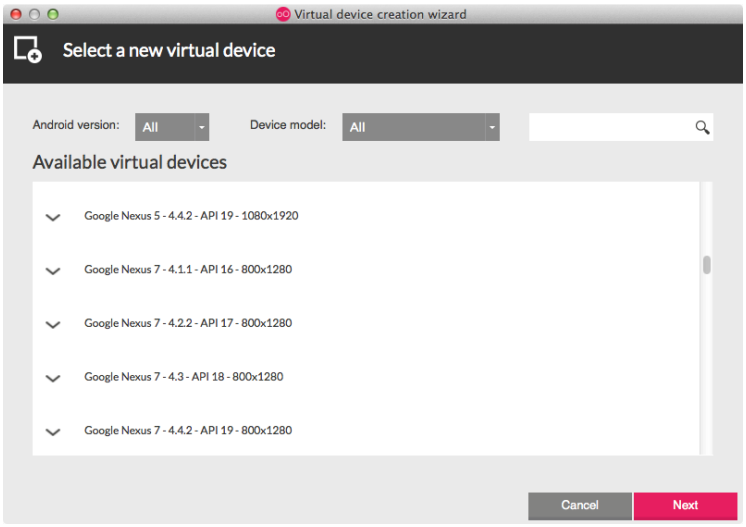
The **Select a new virtual device** window opens:



3. Click **Sign in**.
   The **Credentials** window opens:



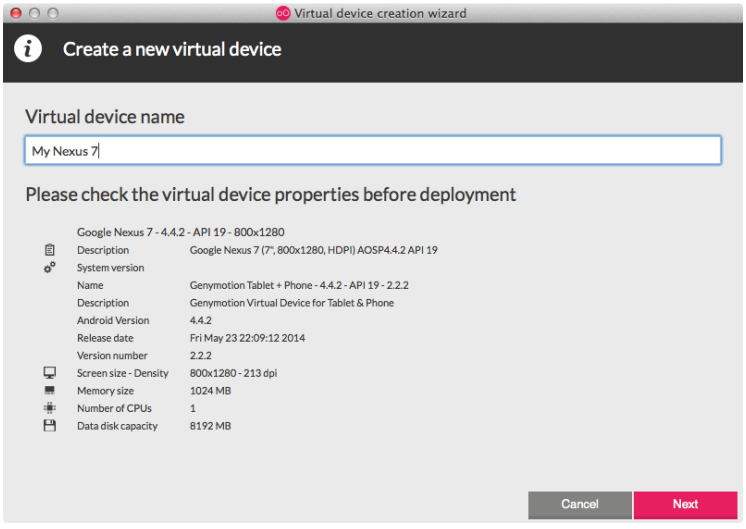
4. Fill in the fields with your username and password and click **Sign in**.
The **Available virtual devices** list appears:


Virtual device creation wizard
Select a new virtual device
Android version:
All
Device model:
All
Available virtual devices
Google Nexus 5 - 4.4.2 - API 19 - 1080x1920
Google Nexus 7 - 4.1.1 - API 16 - 800x1280
Google Nexus 7 - 4.2.2 - API 17 - 800x1280
Google Nexus 7 - 4.3 - API 18 - 800x1280
Google Nexus 7 - 4.4.2 - API 19 - 800x1280
Cancel
Next

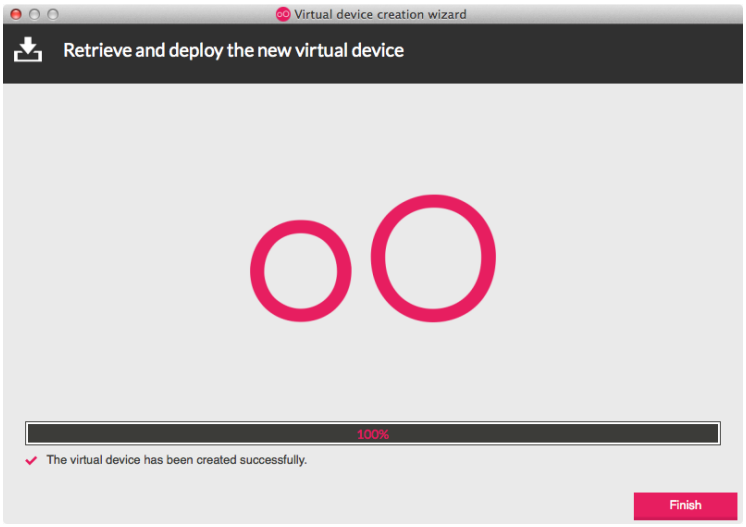
5. Select a virtual device from the list and click **Next**.

> ***If you cannot add a virtual device at this step, you may be running out of free space. We recommend that you check the free remaining space on your hard disk.***

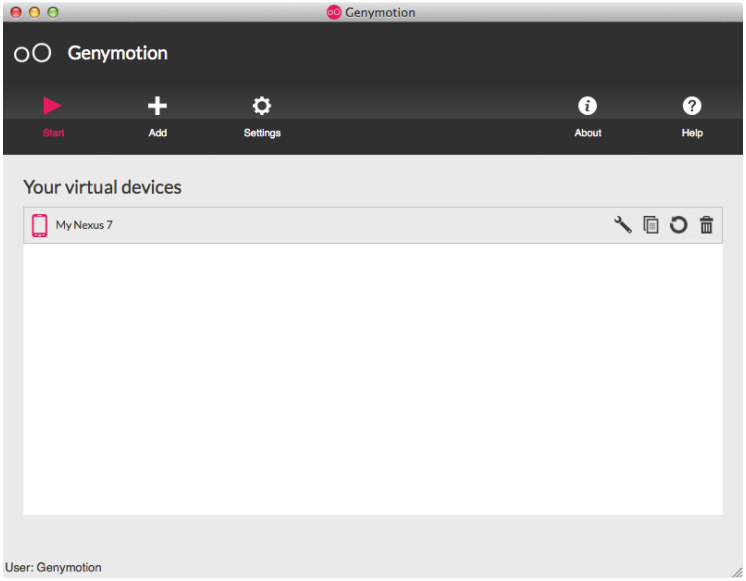
The **Create a new virtual device** window opens:



6. Enter a name for your new virtual device and click **Next**.
   Your virtual device is being downloaded and deployed:


Virtual device creation wizard
Retrieve and deploy the new virtual device
100%
The virtual device has been created successfully.
Finish

7. Click **Finish** to close the deployment window.
   Your virtual device appears in the Genymotion main window:



8. Click ▶ to start your newly created virtual device.
   The virtual device window opens:

9. Deploy your Android application in either of the following ways:
   - Drag and drop the application `APK` file into the virtual device window.
   - Run the following command: `adb install <application name>.apk`.
   - Download and install the application directly from the virtual device using a web link.

For more information about sensor and feature emulation as well as interaction with a virtual device, please refer to sectionchapter *Virtual Devices*.

Genymotion Application

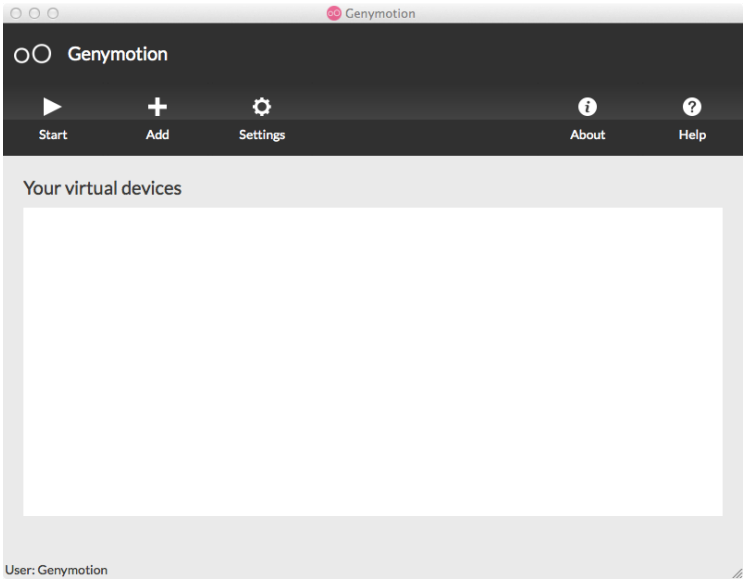
This sectionchapter introduces Genymotion user interface and actions you can perform from the different windows. Therefore, you will learn to start Genymotion, to add and start a virtual device, to configure the application, to get information and help, and finally to update Genymotion.

Starting Genymotion

Start Genymotion in one of the following ways depending on your operating system:

- **Windows**: click from your desktop.
- **Mac OS X**: click from the **Applications** directory.
- **Linux**: run `<Genymotion installer path>/genymotion`.

The Genymotion main window opens:



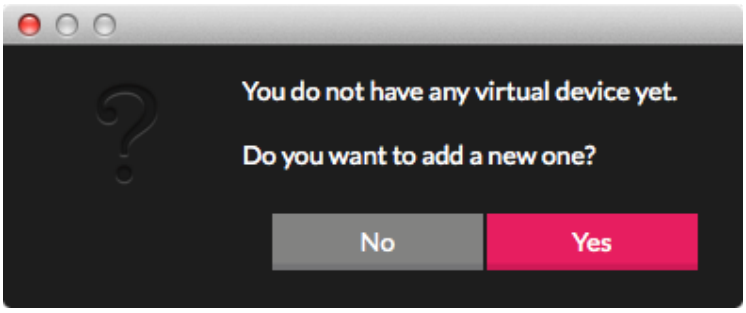
From the menu bar, you can perform the following actions:

- Start the selected virtual device using **Start** ;
- Add a new virtual device using **Add** ;
- Open Genymotion settings using **Settings** ;
- Open the information window using **About** ;
- Open the documentation using **Help** .

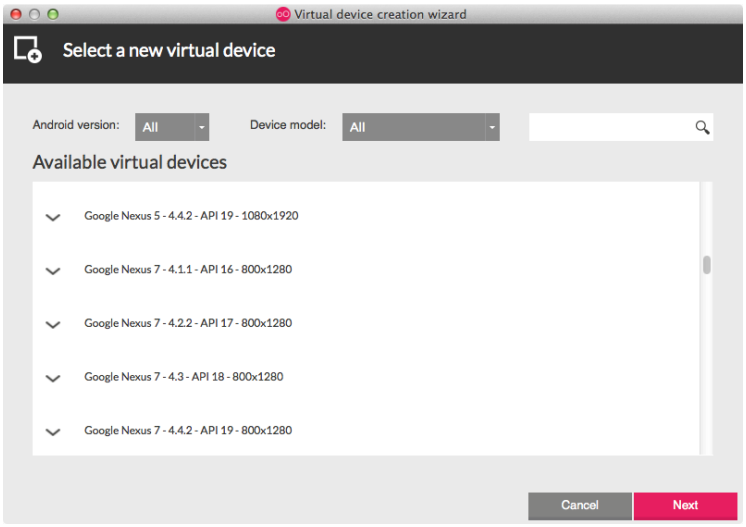
Adding a new virtual device

To add a virtual device, perform the action corresponding to your situation:

- You have never created a virtual device:
  When the following window pops up, click **Yes**:

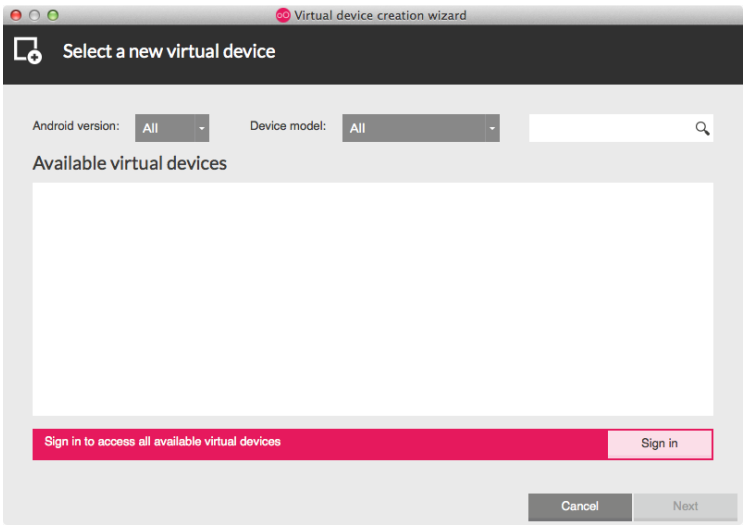


- You have already created a virtual device:
  Click + from the main window.
  The **Select a new virtual device** window appears:

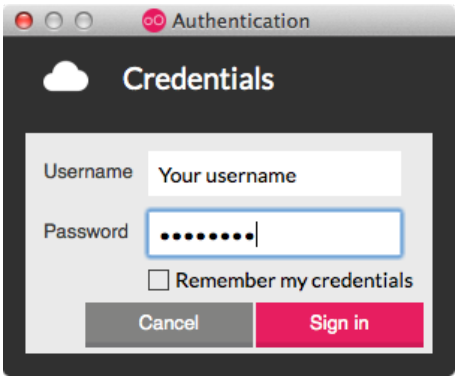

Virtual device creation wizard
Select a new virtual device
Android version:
All
Device model:
All
Available virtual devices
Google Nexus 5 - 4.4.2 - API 19 - 1080x1920
Google Nexus 7 - 4.1.1 - API 16 - 800x1280
Google Nexus 7 - 4.2.2 - API 17 - 800x1280
Google Nexus 7 - 4.3 - API 18 - 800x1280
Google Nexus 7 - 4.4.2 - API 19 - 800x1280
Cancel
Next

If you cannot see any virtual device in the list, you need to sign in to your Genymotion account:

1. In the **Select a new virtual device** window, click **Sign in**:



The **Credentials** window opens:



2. Enter your username and password.
3. Choose whether or not to remember your credentials for future connections and click **Sign in**.

For more information about deploying a virtual device, please refer to sectionchapter *Getting Started*.

You can then select a virtual device from the **Available virtual devices** list, filter virtual devices by Android version or device model or add a custom virtual device, as explained in the procedures mentioned below.:

Filtering virtual devices by Android version

From the **Android version** drop-down list of the Genymotion main window, you can choose to display only virtual devices running a specific Android version.

You can also filter virtual devices using the search bar.

Available versions are:

- 2.3.7, also known as API 10 or Gingerbread;
- 4.1.1, also known as API 16 or Jelly Bean;
- 4.2.2, also known as API 17 or Jelly Bean;
- 4.3, also known as API 18 or Jelly Bean;
- 4.4.4, also known as API 19 or KitKat;
- 5.0.0, also known as API 21 or Lollipop;
- 5.1.0, also known as API 22 or Lollipop.

Filtering virtual devices by model

From the **Device model** drop-down list of the Genymotion main window, you can choose to display only a certain range of virtual devices.

You can also filter virtual devices using the search bar.

Available models are:

- Google devices:
  - Google Galaxy Nexus;
  - Google Nexus 9;
  - Google Nexus 6;
  - Google Nexus 10;
  - Google Nexus 4;
  - Google Nexus 5;
  - Google Nexus 7;
  - Google Nexus 7 2013;
  - Google Nexus One;
  - Google Nexus S.
- HTC devices:
  - HTC Evo;
  - HTC One;
  - HTC One X;
  - HTC One XL.
- LG devices:
  - LG Optimus L3 II.

- Motorola devices:
  - Motorola Droid Razr;
  - Motorola Moto X;
  - Motorola Xoom.
- Samsung devices:
  - Samsung Galaxy Note;
  - Samsung Galaxy Note 2;
  - Samsung Galaxy Note 3;
  - Samsung Galaxy S2;
  - Samsung Galaxy S3;
  - Samsung Galaxy S4;
  - Samsung Galaxy S5.
- Sony devices:
  - Sony Xperia S;
  - Sony Xperia Tablet S;
  - Sony Xperia Tablet Z;
  - Sony Xperia Z.

Adding a custom virtual device

If you cannot find the virtual device you need, you can select a customizable phone or tablet from the available ones:

- Custom Phone - 4.1.1 - API 16 - 768x1280;
- Custom Phone - 4.2.2 - API 17 - 768x1280;
- Custom Phone - 4.3 - API 18 - 768x1280;
- Custom Phone - 4.4.4 - API 19 - 768x1280;
- Custom Phone - 5.0.0 - API 21 - 768x1280;
- Custom Phone - 5.1.0 - API 22 - 768x1280;
- Custom Tablet - 4.1.1 - API 16 - 2560x1600;
- Custom Tablet - 4.2.2 - API 17 - 2560x1600;
- Custom Tablet - 4.3 - API 18 - 2560x1600;
- Custom Tablet - 4.4.4 - API 19 - 2560x1600;
- Custom Tablet - 5.0.0 - API 21 - 2560x1600;
- Custom Tablet - 5.1.0 - API 22 - 2560x1600.

Once you have deployed one of those virtual devices, you can edit the RAM, screen size and density from the **Configuration** menu by clicking .

For more information about configuring virtual devices, please refer to section *Configuring a virtual device*.

Starting a virtual device

After having created one or several virtual devices, they are made available in the **Your virtual devices** list of the Genymotion main window.

To start a virtual device:

1. Select the virtual device you wish to run.
2. Click ▶.

For more information about running a virtual device, please refer to section chapter *Virtual Devices*.

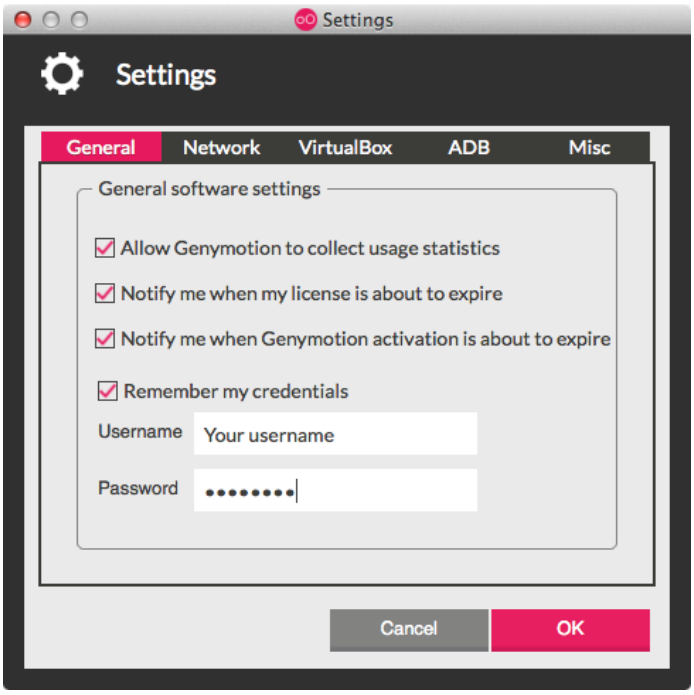
Configuring Genymotion

When clicking ⚙ from the main window, you can configure Genymotion with different kinds of parameters:

- General;
- Network;
- VirtualBox;
- ADB;
- Misc.

General

The **General** tab contains settings regarding your license and account.



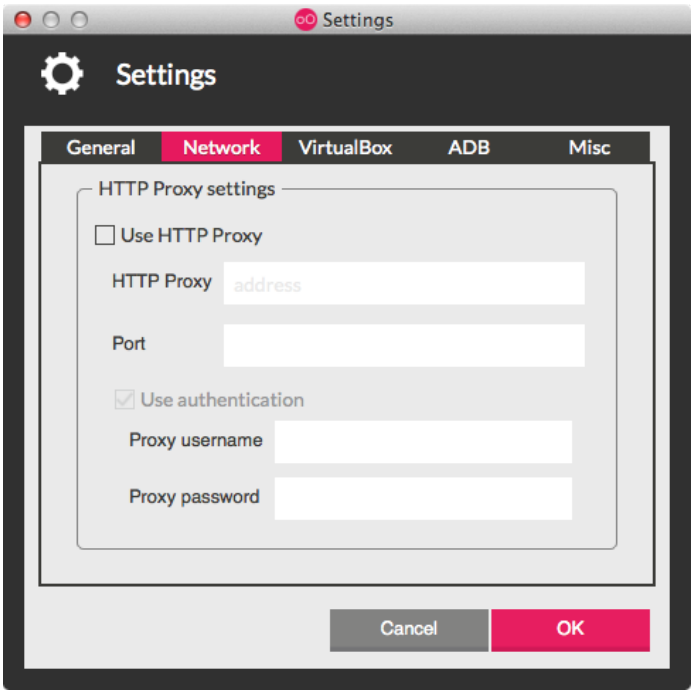
You can check or uncheck options according to your preferences.

- **Allow Genymotion to collect usage statistics**: allows Genymotion to retrieve usage statistics.
  This helps us understand how the application is used in order to further improve it.
- **Notify me when my license is about to expire**: enables license notifications.
  Genymotion warns you when your license is about to expire.
- **Notify me when Genymotion activation is about to expire**: enables activation notifications.
  Genymotion warns you when you need to renew your activation in order to keep using the application. To do so, you must sign in to your Genymotion account via the website.
- **Remember my credentials**: enables quick connections.
  You must enter your username and password in the corresponding fields.

Your password will not be stored in plain text but in an encrypted form.

Network

From the **Network** tab, you can modify the network settings to adapt to your Internet access.

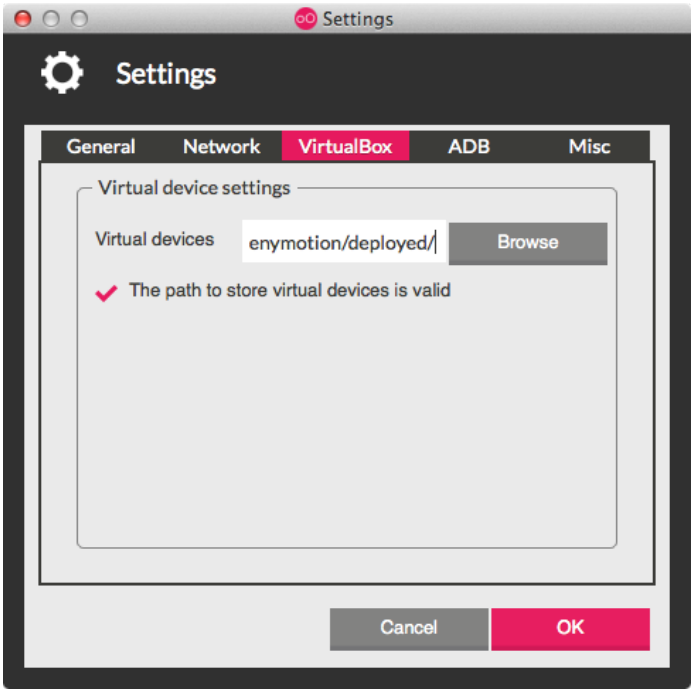


To define your HTTP proxy settings, check the following options:

- **Use HTTP Proxy**: enables the Genymotion application to use a proxy when connecting to the Genymotion website.
  You must set your HTTP proxy address and port in the corresponding fields.
- **Use authentication**: enables proxy authentication.
  You must enter your proxy username and password in the corresponding fields.

VirtualBox

From the **VirtualBox** tab, you can define the storage location of your virtual devices.

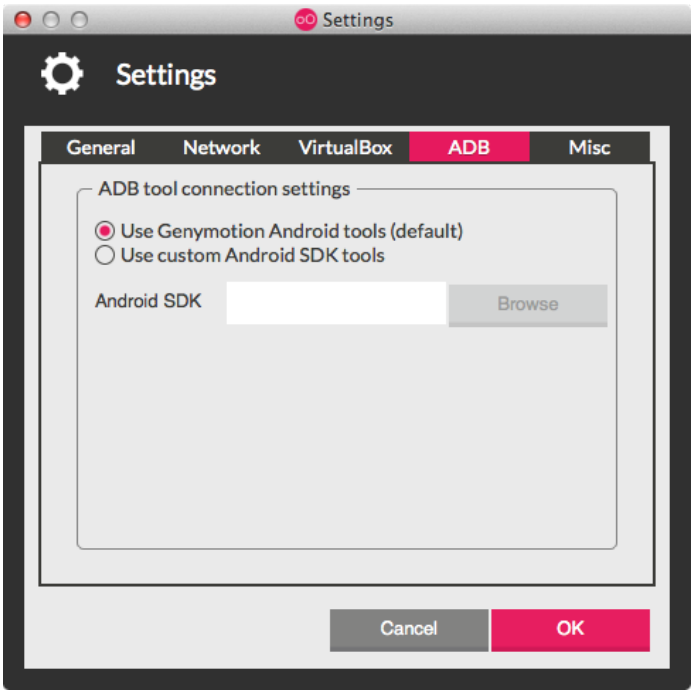


In the **Virtual devices** field, set where to store Genymotion virtual devices by clicking **Browse**.

The virtual device path must be an absolute path.

ADB

By default, Genymotion uses its own Android tools. From the **ADB** tab, you can configure Genymotion to use specific Android tools (from the Android SDK).



Use Genymotion Android tools (default) is the option enabled by default.

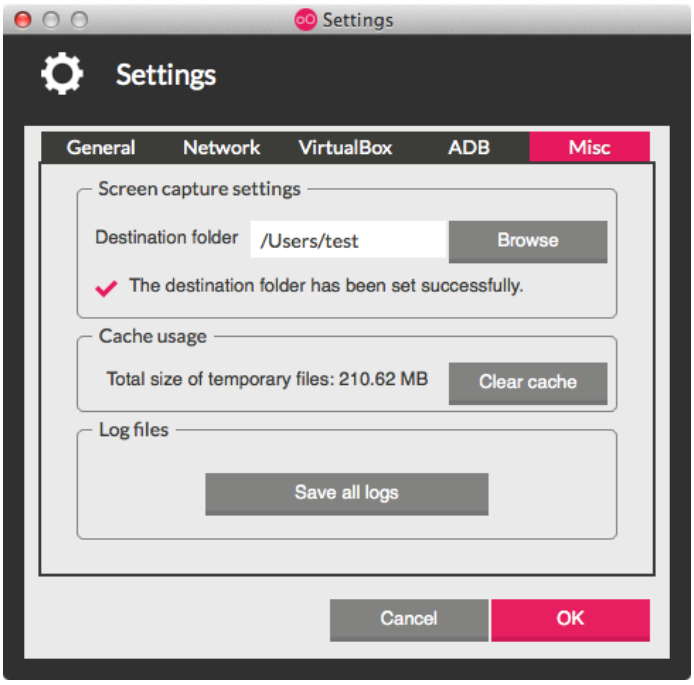
If you wish to use specific Android tools:

1. Download Android Developer Tools (ADT) from the ADT Download page.
2. Extract the archive files in the folder of your choice.
3. Check **Use custom Android SDK tools**.
4. In the **Android SDK** field, set the path to the Android SDK folder by clicking **Browse**.
5. Click **OK**.

⚠ `adt-bundle\sdk\platform-tools` ***is not a valid value.***

Misc

From the **Misc** tab, you can define screen capture settings, clear the cache and create an archive containing your logs.



You can define the following options:

- **Screen capture settings**: defines the storage path of screenshots and screencasts.
  To define where to store screen captures, fill the **Destination folder** field by clicking **Browse**.
- **Cache usage**: indicates the disk space used by temporary files.
  You can remove those files by clicking **Clear cache**.
- **Log files**: generates an archive containing all virtual device logs. To do so:
  1. Click **Save all logs**.
  2. Select the path to save the generated archive.
  3. Wait until the archive is generated and click **Close**.

  By default, the archive containing all log files is stored in the following folders:

  - **Windows**: `%LocalAppData%\Genymobile\Genymotion\deployed\<virtual device name>\`
  - **Mac OS X**: `$HOME/.Genymobile/Genymotion/deployed/<virtual device name>/`
  - **Linux**: `$HOME/.Genymobile/Genymotion/deployed/<virtual device name>/`

  If you generate an archive for assistance purposes, you can send it to us via the *SupportSupport* form.

Getting Genymotion details

Click to get details on the Genymotion version you are using, your license type and expiration date. This window also allows you to register your license key.

For more information about registering a license, please refer to section *Registering the license key*.

Getting help

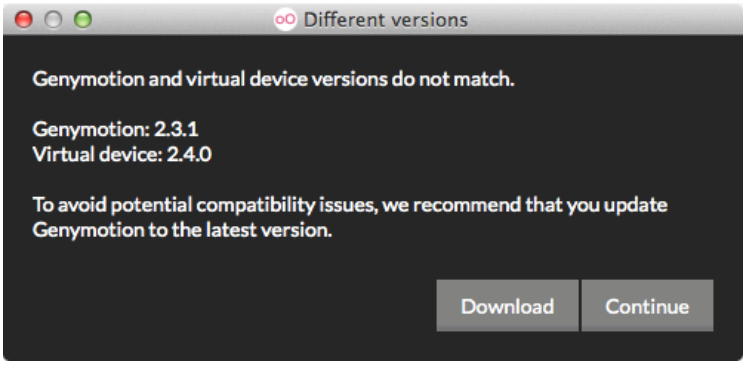
Click to open this user guide.

Updating Genymotion

If your virtual devices are up-to-date and a new version of Genymotion has been released, a pop-up window prompts you to download the latest version of Genymotion.

To update Genymotion:

1. When the following window pops up, click **Download**.


Different versions
Genymotion and virtual device versions do not match.
Genymotion: 2.3.1
Virtual device: 2.4.0
To avoid potential compatibility issues, we recommend that you update Genymotion to the latest version.
Download
Continue

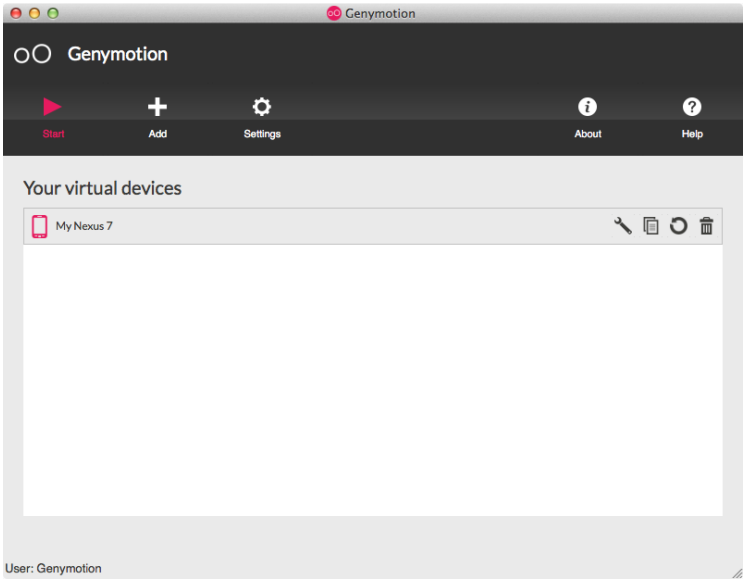
2. Follow the steps mentioned in section *Installing Genymotion*.

Virtual Devices

Virtual devices are Android devices preconfigured and deployed by Genymotion. They allow you to deploy and test your own application with the sensors and features provided by Genymotion. This chapter explains how to manage and run virtual devices, deploy an application, emulate sensors and features, interact with virtual devices, update them and generate their logs.

Managing virtual devices

Your deployed Android virtual devices are displayed in the **Your virtual devices** list of the Genymotion main window:



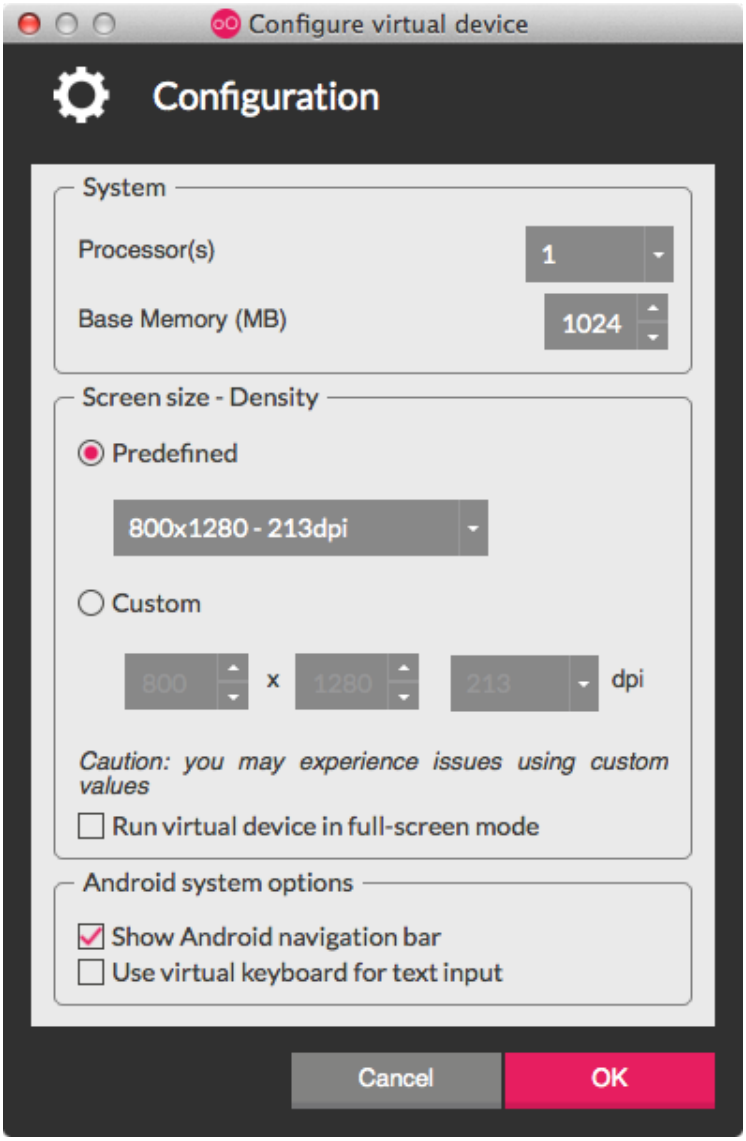
This section details all actions you can perform from this window:

From this list, you can:

- configure a virtual device using;
- clone a virtual device using;
- reset a virtual device using;
- delete a virtual device using.

Configuring a virtual device

When clicking , the **Configuration** window opens:



From this window, you can configure the following parameters:

- **System**
  - **Processor(s)**: sets the number of processors used by the virtual device.
    By default, the value is set to 1, which is the recommended value for an optimal use.

    When defining more processors, we advise setting one less than the total amount of processors to leave one dedicated to the host and avoid performance issues.

- **Base memory (MB)**: sets the memory space allocated to the virtual device.
  The value must be below the memory of your computer and take into account the memory space used by your computer.

  We advise that you set the values recommended for the real devices (512MB to 2048MB).

- **Screen size - density**
  - **Predefined**: sets the screen size and density from a predefined list.
  - **Custom**: sets a custom screen size and density.

    You may experience display or performance issues when using custom screen size and density values.

  - **Run virtual device in full-screen mode**: displays the virtual device in full-screen mode, adjusted to your screen size.
- **Android system options**
  - **Show Android navigation bar**: displays the Android navigation bar in the virtual device.

  - **Use virtual keyboard for text input**: uses the virtual keyboard when selecting a text input area.

Cloning a virtual device

Cloning a virtual device consists in duplicating a virtual device. The clone contains all settings of the original virtual device.

This feature is only available with Indie and Business licenses.

To clone a virtual device:

1. Select the virtual device you wish to clone.
2. Click .
3. Enter a name for the new virtual device.
4. Click **Clone**.
5. Wait until the cloning process is finished and click **Finish**.

Resetting a virtual device

After the deployment of a new virtual device, a snapshot is created. Thus, you can restore the factory settings of your virtual device at any time.

This feature is only available with Indie and Business licenses.

To reset a virtual device:

1. Click ↻.
2. In the confirmation window, click **Yes**.

⚠ ***When using Reset, all installed applications, system patches, modified settings and data will be lost.***

Deleting a virtual device

To delete a virtual device:

1. Select the virtual device you wish to delete.
2. Click 🗑.
3. In the confirmation window, click **Yes**.

Starting virtual devices

You can start virtual devices using either the Genymotion main window or a command prompt.

From the Genymotion main window

To start a virtual device from the Genymotion main window:

1. Select the virtual device you wish to run.
2. Click ▶.

After starting a virtual device, the following window opens. This is where your virtual device runs and where you can interact with it:

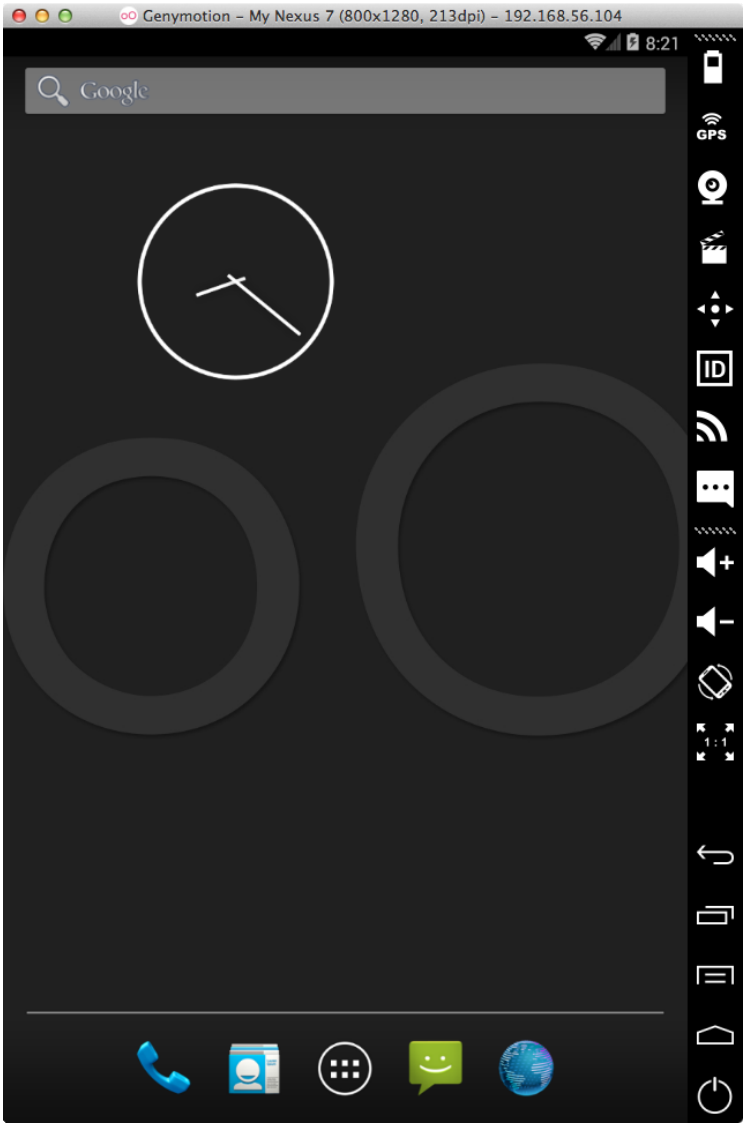
For more information about deploying a virtual device, please refer to section *Getting Started*.

From a command prompt

1. Open a command prompt.
2. Retrieve the list of available virtual devices by running:
   - **Windows:** `<Genymotion installer path>\genyshell -c "devices list"` Genymotion default installation path is `C:\Program Files\Genymobile\Genymotion`.
   - **Mac OS X:** `/Applications/Genymotion.app/Contents/MacOS/genyshell -c "devices list"`
   - **Linux:** `<Genymotion installer path>/genyshell -c "devices list"`

3. Start one of the virtual devices by running:
   - **Windows:** `<Genymotion installer path>\player --vm-name "<virtual device name>"`
   - **Mac OS X:** `/Applications/Genymotion.app/Contents/MacOS/player --vm-name "<virtual device name>"`
   - **Linux:** `<Genymotion installer path>/player --vm-name "<virtual device name>"`

After starting a virtual device, the following window opens. This is where your virtual device runs and where you can interact with it:



For more information about deploying a virtual device, please refer to section *Getting Started*.

After starting a virtual device, the following window opens. This is where your virtual device runs and where you can interact with it:

For more information about deploying a virtual device, please refer to section *Getting Started*.

Deploying an application

To deploy an application to a virtual device, use either of the following methods:

- Drag and drop the application `APK` file into the virtual device window.
- Run the following command: `adb install <application name>.apk`.
- Download and install the application directly from the virtual device using a web link.

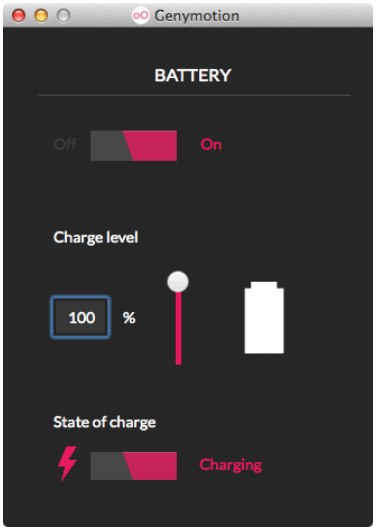
Emulating sensors and features

To simulate various behaviors of your application according to specific use cases, Genymotion provides easy-to-use widgets which emulate the following sensors and features:

- Battery;
- GPS;
- Camera;
- Capture;
- Remote control;
- Identifiers;
- Network;
- Phone.

Battery

The Battery widget allows you to test how your application reacts with different battery charge levels and states of charge.



To use the Battery widget:

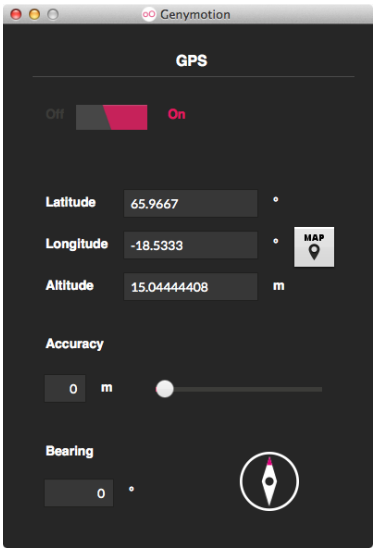
1. Click .
2. Activate the battery simulation mode by clicking **On**.
3. Modify the charge level using the slider or enter a value in the **Charge level** field.
4. Modify the state of charge by clicking the **State of charge** button:
   - Click once to activate the **Charging** state.
     This simulates that the power supply is plugged in and the battery is charging.

- Click twice to activate the **Discharging** state.
  This simulates that the power supply is unplugged and the battery is discharging.

By default, the virtual device emulates the same battery charge level as the one of your computer. If your computer does not have a battery (desktop computer), the simulation mode is automatically activated.

GPS

The GPS widget allows real-time activation and modifications of a position, accuracy and bearing.



To use the GPS widget:

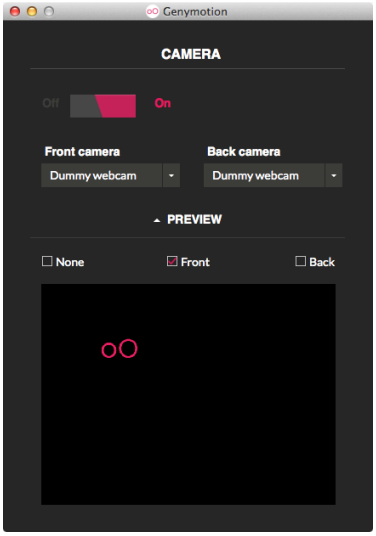
1. Click GPS.
2. Activate the GPS simulation mode by clicking **On**. This enables the reception of generated GPS frames in the virtual device.
3. Set the latitude value you wish to simulate using the **Latitude** field.
   The latitude value must range from -90° to 90°.
4. Set the longitude value you wish to simulate using the **Longitude** field.
   The longitude value must range from -180° to 180°.
5. Set the altitude value you wish to simulate using the **Altitude** field.
   The altitude value must range from -20m to 10000m.
6. Set an accuracy value using the slider or by entering a value in the **Accuracy** field.
   The accuracy value must range from 0m to 200m.

7. Set a bearing value using the compass or by entering a value in the **Bearing** field. The bearing value must range from 0° to 359,99°.

   Many applications do not rely on the GPS orientation, but use the device accelerometer or gyroscope to determine the bearing of the device, which are not yet supported.

Camera

The Camera widget allows you to send a video stream from a virtual device to the Android system. With this widget, you can test an Android application that uses an Android built-in camera.



The video stream can come from a dummy camera or a real physical webcam connected or integrated into your computer.

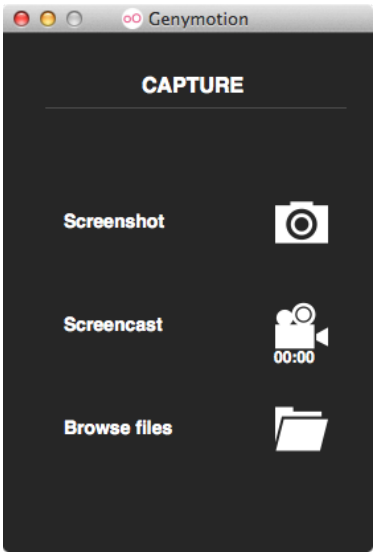
To use the Camera widget:

1. Click .
2. Activate the Camera widget by clicking **On**.
   Genymotion detects available webcams on your computer.
3. Select the source of data you wish to use in the **Front camera** and **Back camera** fields. The front camera sends data to the Android front camera and the back camera sends data to the Android back camera.
   - Dummy webcam: data are images generated by the widget;
   - Physical (real) webcam: data are images sent by the selected webcam.
4. Click **Preview** to see the video stream sent to the Android system. You can check the following options:
   - **None**: does not display any data;
   - **Front**: displays the front camera data;
   - **Back**: displays the back camera data.

Capture

The Capture widget allows you to take a screenshot or screencast of virtual devices. This way, you can broadcast images or videos of your applications.

This feature is only available with Indie and Business licenses.



To use the Capture widget, click .

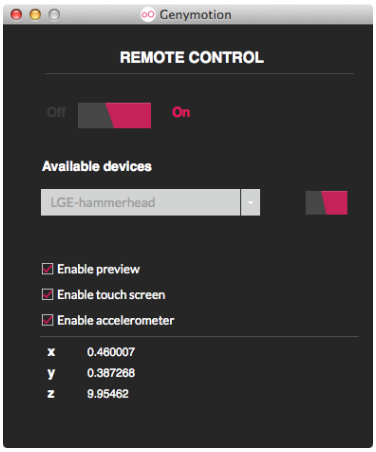
- **Screenshot**: When clicking , a screenshot of your virtual device is captured and stored in the configured folder.
- **Screencast**: When clicking , a video of your virtual device starts recording. Clicking twice stops the recording.
  If your virtual device emits sound, it will be captured in the video.
- **Browse files**: When clicking , your file explorer opens, allowing you to directly access your screenshots and screencasts.
  All screenshots and screencasts are stored in your home directory, in a folder named with your virtual device name. You can change this default folder in Genymotion **Settings > Misc**, as explained in section *Misc*.

All features can be accessed via shortcuts even if the Capture widget is not displayed.

Remote control

With the Remote control widget, you can take control of a virtual device from a physical device (any phone or tablet running Android version 2.2/API 8/Froyo or above). This widget works with a specific Android application that runs on the physical device and forwards touch inputs and accelerometer events to Genymotion. As a result, you can test your application as if you were holding a device in your hands.

This feature is only available with Indie and Business licenses.



The Remote control widget requires to have ADB installed on your computer. For more information, please refer to section *ADB*.

To use the Remote control widget:

1. Connect your physical device either by wire or with Wi-Fi.
   To connect with Wi-Fi, your physical device must support ADB over network. If so:
   1. On your physical device, go to **Menu > System settings > Developer options**.

      If you have not unlocked this menu yet, go to* Menu > System settings > About *and click several times on* Build number *until you get a message meaning that* Developer options *are now available.

   2. Check **Android debugging** and then **ADB over network**.
   3. Connect your physical device to the Wi-Fi and retrieve its IP address from the Wi-Fi menu.
   4. Open a command prompt and enter `<path to ADB>\connect <IP>`.
2. Click .
3. Activate the widget by clicking **On**.
   Genymotion tries to detect any connected Android device.

4. Select your device from the **Available devices** drop-down list and click **Start**.

   If the device is connected to ADB and not visible in the list, restart the widget.

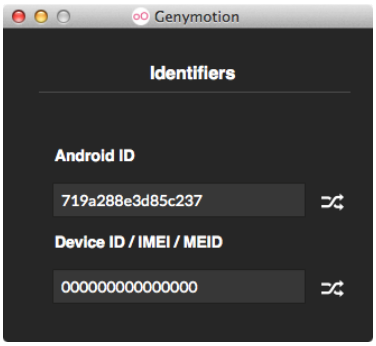
5. Check the desired options:
   - **Enable preview**: enables previewing your Genymotion screen on your physical device.
   - **Enable touch screen**: allows your physical device to send touch events to Genymotion.
   - **Enable accelerometer**: allows your physical device to send accelerometer events to Genymotion.

The Remote control widget automatically stops when you disconnect your device.

Identifiers

The Identifiers widget shows **Device ID** and **Android ID** numbers. You can view and edit these values at any time, without having to reboot your virtual device.

This feature is only available with Indie and Business licenses.



To use the Identifiers widget, click ID.

- **Android ID**
  An Android ID is a 64-bit number randomly generated when the user first sets up the device. It remains the same for the whole lifetime of the user's device. Android 4.2.2 and greater versions support multiple user accounts, each one having a unique Android ID.
  When clicking, a random Android identifier is generated. Valid Android ID numbers are 16-hexadecimal digit long.

  You are not allowed to set an empty Android ID.

- **Device ID / IMEI / MEID**
  By default, a new virtual device is deployed with the default device ID number 00000000000000 0.
  When clicking, a random identifier is generated.
  As IMEI or MEID numbers are used as device ID, Genymotion generates numbers compliant with the GSM 02.16 standard and the 3GPP2 specification (14 digits or hexadecimal digits + a

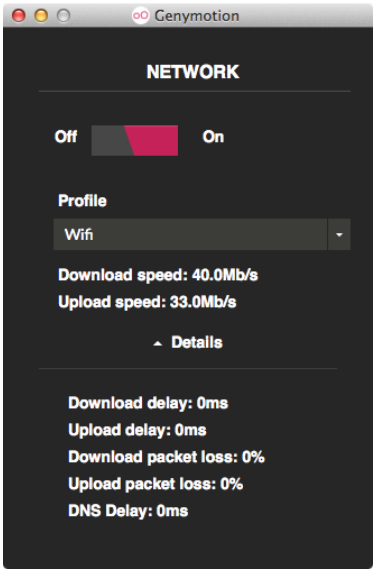
checksum digit).
Valid characters for setting device ID/IMEI/MEID are:

- lower-case and upper-case letters **[a-z, A-Z]**;
- digits **[0-9]**;
- dot **[.]**;
- dash **[-]**;
- underscore **[_]**.

Network

The Network widget allows you to test how your application reacts with different network quality and performance types.

This feature is only available with Indie and Business licenses.



To use the Network widget:

1. Click .
2. Activate the network simulation by clicking **On**.

   When activating the widget for the first time, the profile network is automatically set to* Wifi. *It then takes the last network profile used.

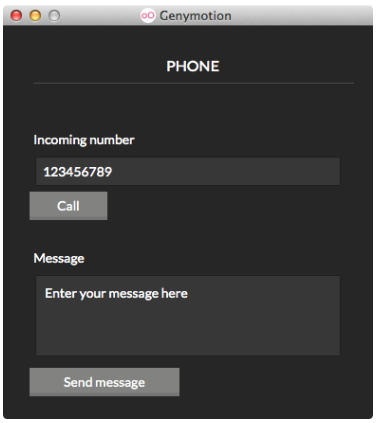
3. Select a network type from the **Profile** drop-down list. Network profiles and their corresponding values are listed in the table below.

	Upload speed	Download speed	Upload delay	Download delay	Upload packet loss	Download packet loss	DNS delay
No data	0Kb/s	0Kb/s	0ms	0ms	100%	100%	0ms
GPRS	40Kb/s	40Kb/s	500ms	500ms	0.01%	0.01%	1000ms
Edge	200Kb/s	240Kb/s	400ms	400ms	0.01%	0.01%	800ms
3G	1.5Mb/s	7.2Mb/s	100ms	100ms	0.01%	0.01%	200ms
4G	5.5Mb/s	17.9Mb/s	50ms	50ms	0.01%	0.01%	100ms
4G (high DNS delay)	5.5Mb/s	17.9Mb/s	50ms	50ms	0.01%	0.01%	3000ms
4G (high packet losses)	5.5Mb/s	17.9Mb/s	50ms	50ms	10%	10%	100ms
Wifi	33.0Mb/s	40.0Mb/s	0ms	0ms	0%	0%	0ms

Phone

The Phone widget allows to test applications relying on telephony features and observe their behavior when receiving a call or a text message.

This feature is only available with Indie and Business licenses.



To use the Phone widget, click or **Ctrl + 8**.

To simulate an incoming call:

1. Enter an incoming phone number.
2. Click **Call**.

To simulate an incoming message:

1. Enter an incoming phone number.
2. Enter a text message.
3. Click **Send message**.
   The text message is displayed in the virtual device via a notification and can also be read in the **Messaging** application.

Interacting with virtual devices

This section describes features that help you easily interact with your virtual devices.

Multi-touch simulation

Because in most cases, virtual devices are controlled with mouse and keyboard, some shortcuts have been implemented to help simulate common gestures:

- Zoom in: **right click + move mouse to the left**
- Zoom out: **right click + move mouse to the right**
- Tilt forth: **right click + move mouse up**
- Tilt back: **right click + move mouse down**
- Clockwise rotation: **Shift + right click + move mouse to the right**
- Counterclockwise rotation: **Shift + right click + move mouse to the left**

If you use Mac OS X, replace right click with ctrl + click.

Drag and drop

To drag and drop files from your computer to the virtual device, ADB must be installed. To configure ADB, please refer to section *ADB*. The behavior of dragged and dropped files is different according to the file type:

- **Regular files**: Regular files are stored in `/sdcard/Download`.
  They can be accessed via the **File Manager** application provided in the virtual device.
- **Android applications**: APK files are installed on the virtual device.
  If the same application already exists but with another signature, you can decide to override the existing application.

- **Flashable archives**:
  Zip archives detected as flashable (containing a `/system` folder) are flashed on the device.

  Such archives may damage your virtual device. We recommend restarting your virtual device after flashing an archive.

Copy and paste

The clipboard is shared between your computer and Genymotion. Thus, you can easily copy and paste text from your computer to Genymotion, and vice versa.

Increase/Decrease volume

You can control the volume of the sound emitted by your virtual device:

- Click to increase the volume.
- Click to decrease the volume.

Rotate screen

You can rotate the screen of your virtual device by clicking .

Depending on the Android version and the density of your virtual device, the Rotate screen feature may not be available. If you are using an Android version 4.2 or above, make sure that the Rotate screen feature is not locked in the right-hand bar. Rotation might also be locked in portrait or landscape mode by the current running application. In this case, it is not possible to change it via the Rotate screen button or via the `rotation setangle` command in Genymotion Shell.

Pixel Perfect

With Pixel Perfect, you can be highly precise in the development of your user interface and ensure every pixel of your application really looks as it should. One pixel of the virtual device is displayed using one pixel of your computer screen.

This feature is only available with Indie and Business licenses.

Click once to activate Pixel Perfect. Click twice to deactivate it.

If the virtual device screen size is larger than your computer screen size, the virtual device window will be maximized and you will be able to use scrollbars to move inside the screen.

Navigation buttons

With the navigation buttons, you can navigate between applications or display actions that can be performed.

- **Back**
  Click once to go back to the previous page. Click twice to exit the application.
- **Recent apps**
  Click to display the recently used applications.
- **Menu**
  Click to display actions you can perform within an application.
- **Home**
  Click to display the home page at any time.
- **Power**
  Click to shut down the running virtual device.

Display tips

When navigating within a virtual device, you can at any time change its display:

- **Full-screen mode**: You can switch to full-screen mode by pressing **F11**. Pressing a second time reverts to the original screen size.

  On Mac OS X, you may have to use the key combination **ctrl + fn + F11.**

- **Custom size**: You can resize the virtual device window by selecting and dragging an edge or a corner of the window.
- **Fit to content**: When the virtual device window is resized, black areas appear on the borders. Double-click in one of those areas to fit the virtual device window size to its content.

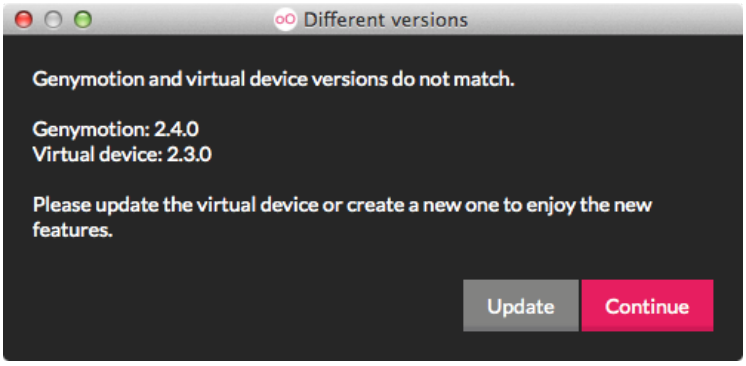
Updating virtual devices

If Genymotion is up-to-date and a new version of virtual devices has been released, a pop-up window prompts you to automatically update your virtual devices while keeping all your installed packages and applications.

This is only possible with an Indie or a Business license. If you are using the free version of Genymotion, you must deploy the new version of virtual devices.

To update your virtual devices:

1. When the following window pops up, click **Update**.


Different versions
Genymotion and virtual device versions do not match.
Genymotion: 2.4.0
Virtual device: 2.3.0
Please update the virtual device or create a new one to enjoy the new features.
Update
Continue

2. Wait until the update process is finished and click **Finish**.

You must have the latest version of Genymotion to update your virtual devices.

Generating virtual device logs

In some cases, notably for assistance purposes, you may need to generate a log archive, either for a specific virtual device or for all virtual devices. Follow either of the procedures below.:

For one virtual device

From the Genymotion main window:

1. Right-click on the virtual device.
2. Click **Generate log archive**.
3. Select the path to save the generated archive.
   By default, log files are stored in the following folders:
   - **Windows**: `C:\Users\<user>\AppData\Local\Genymobile\Genymotion\deployed\<virtual device name>\Logs`
   - **Mac OS X**: `$HOME/.Genymobile/Genymotion/deployed/<virtual device name>/`
   - **Linux**: `$HOME/.Genymobile/Genymotion/deployed/<virtual device name>/`
4. Wait until the archive is generated and click **Close**.

If you have generated logs for assistance purposes, you can send the archive or the log files to us via the *SupportSupport* form.

For all virtual devices

From the Genymotion main window:

1. Click ⚙.
2. In the **Misc** tab, click **Save all logs**.
3. Select the path to save the generated archive.
   By default, log files are stored in the following folders:
   - **Windows**: `C:\Users\<user>\AppData\Local\Genymobile\Genymotion\deployed\<virtual device name>\Logs`
   - **Mac OS X**: `$HOME/.Genymobile/Genymotion/deployed/<virtual device name>/`
   - **Linux**: `$HOME/.Genymobile/Genymotion/deployed/<virtual device name>/`
4. Wait until the archive is generated and click **Close**.

If you have generated logs for assistance purposes, you can send the archive or the log files to us via the *SupportSupport* form.

Genymotion Plugin for Eclipse

The Genymotion plugin for Eclipse allows you to test your application developed with the Eclipse IDE. It uses ADB to connect to any active virtual device and push your application. To use the plugin, you need to have the Android Developer Tools plugin for Eclipse installed. In this chapter, you will be able to install, use the plugin and run Android applications.

Installing the plugin

You can install Genymotion plugin for Eclipse in one of the following ways:

- Update Site method (recommended);
- Manual method.

Update Site method (recommended)

1. Start Eclipse.
2. Go to `Help/Install New Software` menu and click **Add**.
3. Fill in the fields with the following values and click **OK**.
   - Name: **Genymotion**
   - Location: **http://plugins.genymotion.com/eclipse**
4. Expand **Genymobile**.
5. Click **Select all** and click **Next**.
6. Click **Next**.
7. Read and accept the license terms.
8. Click **Finish**.
   A security warning indicates that the plugin is not signed; click **OK**.
9. Click **Yes** to restart Eclipse.

The Genymotion plugin button is displayed in the toolbar.

Manual method

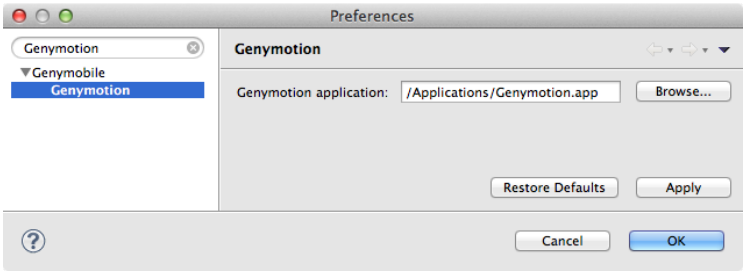
1. Ensure Eclipse is closed.
2. Download the plugin from the *Genymotion downloadGenymotion download* page.
3. Follow the steps corresponding to your operating system:
   - **Windows**
     If you have administrator rights, put the `.jar` archive in the `Plugins` directory of your Eclipse installation folder.
     Without administrator rights, put the `.jar` archive in the `Plugins` directory of your `Local Settings\Eclipse` folder.

- **Mac OS X**
  With administrator rights, put the `.jar` archive in the `Plugins` directory of your Eclipse installation folder.
- **Linux**
  If you have administrator rights, put the `.jar` archive in the `Plugins` directory of your Eclipse installation folder.
  Without administrator rights, put the `.jar` archive in the `Plugins` directory of your `/home/<user>/Eclipse` folder.

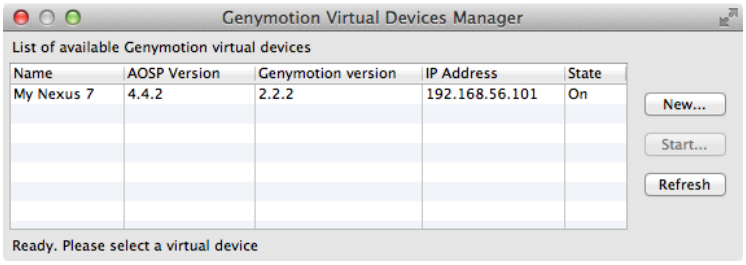
Using the plugin

To start using the Genymotion plugin:

1. Click .
   The following window opens:



2. In the **Genymotion application** field, browse for the Genymotion application installation directory:
   - **Windows:** `C:\Program Files\Genymobile\Genymotion`
   - **Mac OS X:** `/Applications/Genymotion.app`
   - **Linux:** `/home/<user>/genymotion`
3. Click **Apply** and **OK**.
4. Click to open the **Genymotion Virtual Devices Manager** window:



From this window, you can perform the following actions:

- Create a new virtual device using **New**;
  This automatically starts the Genymotion creation wizard.
- Start a virtual device using **Start**;
- Refresh the list of virtual devices using **Refresh**.

The virtual device activation status is displayed in the **State** column. Values can be:

- **Off**: the virtual device is deactivated;
- **Paused**: the virtual device has been started and paused.
  The **Restart** action gets back to the exact same state;
- **On**: The virtual device is activated, but not connected to ADB.
  It means that you cannot select this virtual device in the **Android Device Chooser** window of the ADT plugin.

Running Android applications

To run an Android application in the Genymotion plugin for Eclipse, you first need to make sure that your virtual device is connected to the ADB tool. To do so, please refer to section *ADB*. Then follow the steps below:

1. Click .
2. Select the virtual device you want to use and click **Start**.
3. Minimize the Genymotion window.
4. Right-click on your application project and select **Run as Android application**.
   The **Android Device Chooser** window opens.

After a reboot or an unexpected halt of a virtual device, its name in the* Android Device Chooser *window may become irrelevant. Close and reopen the plugin to solve this.

While the Genymotion plugin window is open, errors are displayed in the Eclipse console.

Genymotion Plugin for Android Studio

The Genymotion plugin for Android Studio allows you to test your application developed with the Android Studio IDE. It uses ADB to connect to any active virtual device and push your application. In this chapter, you will be able to install, use the plugin and run Android applications.

Installing the plugin

You can install Genymotion plugin for Android Studio in one of the following ways:

- JetBrains repository method (recommended);
- Manual method.

JetBrains repository method (recommended)

1. Start Android Studio.
2. Go to:
   - **Windows and Linux:** `File/Settings`.
   - **Mac OS X:** `Android Studio/Preferences`.
3. Select **Plugins** and click **Browse repositories**.
4. Right-click (double-click for Mac OS X) on **Genymotion**.
5. Click **Download and install**.
6. Click **Yes**.
7. Click **Close**.
8. Click **OK**.
9. Restart Android Studio by clicking **Restart**.

***From Android Studio version 0.3.0 onwards, the toolbar, where Genymotion plugin icon is displayed, is hidden by default. To display it, click* View > Toolbar.**

Manual method

1. Download the Genymotion plugin for Android Studio from the *Genymotion downloadGenymotion download* page.
2. Start Android Studio.
3. Go to:
   - **Windows and Linux**: `File/Settings`.
   - **Mac OS X**: `Android Studio/Preferences`.
4. Select **Plugins** and click **Install plugin from disk**.
5. Select the `genymotion-IDEA-plugin.jar` file.

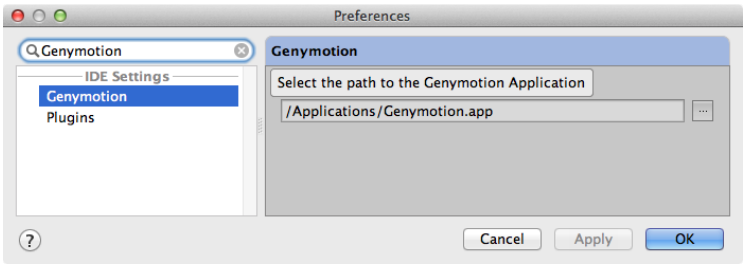
6. Click **OK**.
7. Restart Android Studio by clicking **Restart**.

> ***From Android Studio version 0.3.0 onwards, the toolbar, where Genymotion plugin icon is displayed, is hidden by default. To display it, click*** **View > Toolbar**.

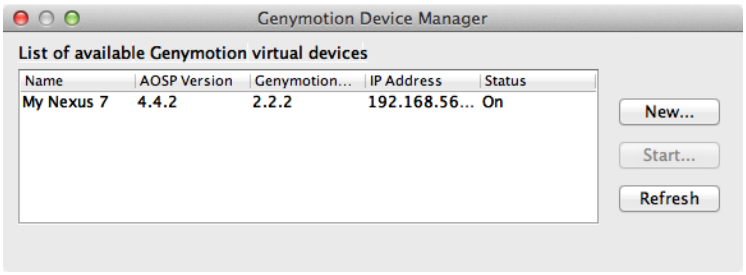
Using the plugin

To start using the Genymotion plugin:

1. Click .
   The following window opens:



2. Browse for the Genymotion application installation directory:
   - **Windows:** `C:\Program Files\Genymobile\Genymotion`
   - **Mac OS X:** `/Applications/Genymotion.app`
   - **Linux:** `/home/<user>/genymotion`
3. Click **OK**.
4. Click to open the **Genymotion Device Manager** window:



From this window, you can perform the following actions:

- Create a new virtual device using **New**;
  This automatically starts the Genymotion creation wizard.
- Start a virtual device using **Start**;
- Refresh the list of virtual devices using **Refresh**.

The virtual device activation status is displayed in the **Status** column. Values can be:

- **Off**: the virtual device is deactivated;
- **Paused**: the virtual device has been started and paused.
  The **Restart** action gets back to the exact same state;
- **On**: The virtual device is activated, but not connected to ADB.
  It means that you cannot select this virtual device in the **Choose Device** window of the ADB plugin.

Running Android applications

1. Click .
2. Select the virtual device you want to use and click **Start**.
3. Close the Genymotion window.
4. In your application project, click .
   The **Choose Device** window opens.
5. Click on the virtual device you started or created.

   After a reboot or an unexpected halt of a virtual device, its name in the Choose Device window may become irrelevant. Close and reopen the plugin to solve this.

6. Click **OK**.

   While Genymotion plugin window is open, errors are displayed in the Android Studio console.

Genymotion Shell

Genymotion provides a shell to script the modification of sensor statuses. This chapter explains how to use Genymotion Shell and lists the available commands.

Starting Genymotion Shell

To start Genymotion Shell, perform the action corresponding to your operating system:

- **Windows**: run `C:\Program Files\Genymobile\Genymotion\genyshell.exe`.
- **Mac OS X**: click from the **Applications** directory.
- **Linux**: run `<Genymotion installer path>/genymotion-shell`.

Interacting with Genymotion Shell

With the commands below, you can perform various basic actions related to the use of Genymotion Shell:

- `help`: displays the list of available commands.
- `pause`: pauses the execution of Genymotion Shell. The value must be set in seconds.
- `version`: returns Genymotion Shell version.
- `exit` or `quit`: closes Genymotion Shell.

Interacting with virtual devices

To modify sensor statuses and values of a virtual device, use the commands listed below:

- `devices list`
  Lists available virtual devices and provides details such as current status, IP address and name.
- `devices refresh`
  Refreshes the virtual device list.
- `devices select`
  Selects a virtual device. Add the ID of the virtual device you wish to select (as displayed in the device list).
- `devices ping`
  Sends a ping message to check that the virtual device is responding.
- `devices factoryreset`
  Resets the virtual device to factory state. Add the ID of the device you wish to reset (as displayed in the device list). Adding the keyword `force` at the end skips the warning message about data loss.
- `battery getmode`
  Returns the current battery mode of the selected virtual device.

- `battery setmode`
  Sets the battery mode of the selected virtual device. The mode can be:
  - `host`: the virtual battery values reflect the host battery values (if any);
  - `manual`: the virtual battery charge level and state of charge can be manually set.
- `battery getlevel`
  Returns the current battery charge level of the selected virtual device. If the battery mode is "host", the returned value is the host value.
- `battery setlevel`
  Sets the battery charge level of the selected virtual device. The value must range from 0% to 100%. This command forces the activation of the manual mode.
- `battery getstatus`
  Returns the current battery state of charge of the selected virtual device.
- `battery setstatus`
  Sets the battery state of charge of the selected virtual device. Values can be:
  - `discharging`: simulates that the power supply is unplugged and the battery is discharging.
    The value ranges from 0% to 100%.
  - `charging`: simulates that the power supply is plugged in and the battery is charging.
    The value ranges from 0% to 100%.
  - `notcharging`: simulates that the power supply has just been unplugged and the battery is not discharging yet.
    The value ranges from 0% to 100%.
  - `full`: simulates that the battery is fully charged.
- `gps getstatus`
  Returns the activation status of the GPS signal reception.
- `gps setstatus`
  Sets the activation status of the GPS signal reception. Values can be:
  - `enabled`: the GPS signal reception is enabled;
  - `disabled`: the GPS signal reception is disabled.
- `gps getlatitude`
  Returns the current latitude value (if the GPS is activated and a latitude value is set) or 0.
- `gps setlatitude`
  Sets the latitude value (and forces the activation of the GPS if deactivated). The value must range from -90° to 90°.
- `gps getlongitude`
  Returns the current longitude value (if the GPS is activated and a longitude value is set) or 0.
- `gps setlongitude`
  Sets the longitude value (and forces the activation of the GPS if deactivated). The value must range from -180° to 180°.
- `gps getaltitude`
  Returns the current altitude value (if the GPS is activated and an altitude value is set) or 0.
- `gps setaltitude`
  Sets the altitude value (and forces the activation of the GPS if deactivated). The value must range from -20m to 10000m.

- `gps getaccuracy`
  Returns the current accuracy value (if the GPS is activated and an accuracy value is set) or 0.
- `gps setaccuracy`
  Set the accuracy value (and forces the activation of the GPS if deactivated). The value must range from 0m to 200m.
- `gps getbearing`
  Returns the current bearing value (if the GPS is activated and a bearing value is set) or 0.
- `gps setbearing`
  Sets the bearing value (and forces the activation of the GPS if deactivated). The value must range from 0° to 359,99°.
- `rotation setangle`
  Sets the rotation angle value of the virtual device. The value must range from 0° to 359°.
- `android version`
  Returns the Android version of the selected virtual device.
- `android getandroidid`
  Returns the Android ID number of the selected virtual device.

  This is only possible with an Indie or a Business license.

- `android setandroidid`
  Sets the Android ID number of the selected virtual device.
  Values can be:
  - `random`: a random Android ID number is generated;
  - custom: you must enter a value containing 16 hexadecimal digits.

  This is only possible with an Indie or a Business license.

  If several users exist on the Android system, the Android ID can only be set for the first user.

- `android getdeviceid`
  Returns the device ID (IMEI/MEID) number of the selected virtual device.

  This is only possible with an Indie or a Business license.

- `android setdeviceid`
  Sets the device ID (IMEI/MEID) number of the selected virtual device.
  Values can be:
  - `none`: no device ID number is generated.
  - `random`: a random device ID number is generated.
  - custom: you must enter a value containing alphanumeric characters, dots, dashes and/or underscores.

  This is only possible with an Indie or a Business license.

- `network getprofile`
  Returns the current network profile of the selected virtual device.

- `network setprofile`
  Sets the network profile of the selected virtual device. Values can be:
  - `no-data`: no network connection is simulated.
  - `gprs`: a GPRS network connection is simulated.
  - `edge`: an Edge network connection is simulated.
  - `3g`: a 3G network connection is simulated.
  - `4g`: a 4G network connection is simulated.
  - `4g-high-losses`: a 4G network connection with packet losses set to 10% is simulated.
  - `4g-bad-dns`: a 4G network connection with a DNS delay set to 3000ms is simulated.
  - `wifi`: a Wi-Fi network connection is simulated.
- `phone call <phone_number>`
  simulates an incoming phone call from a given phone number.
- `phone sms <phone_number> <message>`
  simulates an incoming text message from a given phone number.
- `phone baseband <command>`
  sends commands directly to the baseband. This has been implemented in order to ease script creation. For more information on the phone baseband command and its capabilities, please refer to section *Baseband commands*.

Baseband commands

The `phone baseband` commands send raw data directly to the baseband. In this section, you will find all commands available in Genymotion Shell to directly interact with the baseband.

Commands below return results in your logcat.

- `gsm list`
  lists all incoming and outgoing phone calls and their state.
- `gsm call <phone_number>`
  simulates a new incoming call from a given phone number.
- `gsm busy <remote_number>`
  hangs up an outgoing call (performed from the integrated Dialer application) and reports the remote phone as busy.
- `gsm hold <remote_number>`
  simulates that an incoming or outgoing phone call (performed from the integrated Dialer application) is put on hold.
- `gsm accept <remote_number>`
  simulates that the outgoing phone call (performed from the integrated Dialer application) is answered.
- `gsm cancel <phone_number>`
  simulates that an incoming or outgoing phone call is hung up.
- `gsm data`
  modifies data connection state. Values can be:

  - `unregistered` or `off`: no network available;
  - `home` or `on`: on local network, non-roaming;
  - `roaming`: on roaming network;
  - `searching`: searching networks;
  - `denied`: emergency calls only.
- `gsm voice`
  modifies voice connection state. Values can be:
  - `unregistered` or `off`: no network available;
  - `home` or `on`: on local network, non-roaming;
  - `roaming`: on roaming network;
  - `searching`: searching networks;
  - `denied`: emergency calls only.
- `gsm status`
  displays the current status of the GSM emulation.
- `gsm signal <rssi> <ber> <rs_snr>`
  changes the reported strength and error rate on next (15s) update.
  - `rssi`: the value must range from 0 to 31. Returns 99 if the value is unknown.
  - `ber`: the value must range from 0% to 7%. Returns 99 if the value is unknown.
  - `rs_snr`: the value must range from -200 to 300.
- `cdma ssource <ssource>`
  sets the current CDMA subscription source. Values can be:
  - `nv` : the subscription is read from non-volatile RAM;
  - `ruim`: the subscription is read from RUIM.
- `cdma prl_version <version>`
  dumps the current PRL version.
- `sms send <phone_number> <message>`
  simulates an incoming text message from a given phone number.
- `sms pdu <hexstring>`
  simulates a new incoming text message defined in the PDU format.

Interacting with Genymotion

The commands below allow you to perform actions related to the Genymotion application via Genymotion Shell:

- `genymotion capabilities`
  Returns Genymotion features available on the selected virtual device.
- `genymotion clearcache`
  Clears temporary files and logs.
- `genymotion version`
  Returns the Genymotion version of the selected virtual device.
- `genymotion license`
  Returns information about the Genymotion license (type, validity).

Using Genymotion Shell from a command prompt

You can connect to Genymotion Shell and interact with a virtual device from a command prompt using the commands defined in section *Interacting with virtual devices*.

Options below are specific to the command prompt:

- `-h`: displays the list of available options.
- `-r ip_address`: connects to a given virtual device.
- `-c "command"`: runs the command on the selected virtual device and returns corresponding values.
- `-f file`: runs the content of the file on the selected virtual device and returns corresponding values line by line.

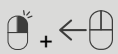
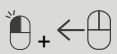
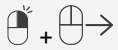
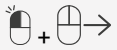
Keyboard Shortcuts

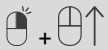
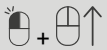
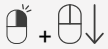
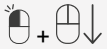
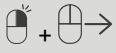
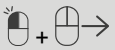
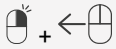
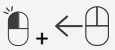
In this section, you will find all available keyboard shortcuts for a faster use of Genymotion and virtual device features.

Genymotion shortcuts

Action	Shortcut Windows/Linux	Shortcut Mac OS X
Start virtual device	Ctrl + L	Cmd ⌘ + L
Add virtual device	Ctrl + N	Cmd ⌘ + N
Open About window	Ctrl + A	Cmd ⌘ + A
Open User Guide	Ctrl + H	
Open Genymotion settings	Ctrl + C	Cmd ⌘ + C
Delete virtual device	Ctrl + D	Cmd ⌘ + D
Open virtual device settings	Ctrl + R	Cmd ⌘ + R
Clone virtual device	Ctrl + P	Cmd ⌘ + P
Reset virtual device	Ctrl + F	Cmd ⌘ + F
Generate virtual device log archive	Ctrl + K	Cmd ⌘ + K

Virtual device shortcuts

Category	Action	Shortcut Windows/Linux	Shortcut Mac OS X
Widgets	Open Battery widget	Ctrl + 1	Cmd ⌘ + 1
Widgets	Open GPS widget	Ctrl + 2	Cmd ⌘ + 2
Widgets	Open Camera widget	Ctrl + 3	Cmd ⌘ + 3
Widgets	Open Capture widget	Ctrl + 4	Cmd ⌘ + 4
Widgets	Open Remote Control widget	Ctrl + 5	Cmd ⌘ + 5
Widgets	Open Identifiers widget	Ctrl + 6	Cmd ⌘ + 6
Widgets	Open Network widget	Ctrl + 7	Cmd ⌘ + 7
Widgets	Open Phone widget	Ctrl + 8	Cmd ⌘ + 8
Capture	Take screenshot	Ctrl + Shift + S	Cmd ⌘ + Shift + S
Capture	Make screencast	Ctrl + Shift + V	Cmd ⌘ + Shift + V
Capture	Open screen capture destination folder	Ctrl + Shift + E	Cmd ⌘ + Shift + E
Multi-touch	Zoom in		Ctrl + 
Multi-touch	Zoom out		Ctrl + 

Category	Action	Shortcut Windows/Linux	Shortcut Mac OS X
Multi-touch	Tilt forth		Ctrl + 
Multi-touch	Tilt back		Ctrl + 
Multi-touch	Rotate clockwise	Shift + 	Ctrl + 
Multi-touch	Rotate counterclockwise	Shift + 	Ctrl + 
Volume	Increase volume	Ctrl + +	Cmd ⌘ + +
Volume	Decrease volume	Ctrl + −	Cmd ⌘ + −
Display	Rotate screen	Ctrl + F11	
Display	Activate/Deactivate Pixel Perfect	Ctrl + R	Cmd ⌘ + R
Display	Activate full-screen	F11	Ctrl + Fn + F11
Display	Show/Hide widget tool-bar	Ctrl + T	Cmd ⌘ + T
Display	Show/Hide display and volume tools	Ctrl + D	Cmd ⌘ + D
Navigation	Back	Ctrl + ←	Cmd ⌘ + ←
Navigation	Recent apps	Ctrl + Space	

Category	Action	Shortcut Windows/Linux	Shortcut Mac OS X
Navigation	Menu	Ctrl + M	Cmd ⌘ + M
Navigation	Home	Ctrl + Home	Cmd ⌘ + Home
Navigation	Power	Ctrl + Esc	

Glossary

A

Accelerometer

A sensor that detects motion and orientation of a device.

ADB

See Android Debug Bridge.

ADT

See Android Developer Tools.

Advanced Micro Dynamics virtualization

A set of hardware extensions for the X86 processor architecture, designed to perform repetitive tasks normally performed by software and improve resource use and virtual machine performance.

AMD-V

See Advanced Micro Dynamics Virtualization.

Android Debug Bridge

A command line utility that allows to communicate with an emulator instance or connected Android device. Android Debug Bridge is a client-server program that includes three components: a client, a server and a service. Genymotion is compliant with Android Debug Bridge.

Android Developer Tools

A plugin for Eclipse IDE that provides a suite of tools for developing applications on Android platforms.

Android ID

A 64-bit number randomly generated when the user first sets up a device. It remains the same for the whole lifetime of the user's device. Android 4.2.2 and greater versions support multiple user accounts, each one having a unique Android ID.

Android SDK

The software development kit that provides developer tools to build, test and debug Android applications, containing among others ADB, ADT and AAPT.

Android Studio

An integrated development environment from which you can develop Android applications. It is based on IntelliJ IDEA.

B

Baseband

The component in charge of a device telephony features. Genymotion emulates a baseband and allows to interact with it via the Phone widget, an API or Genymotion Shell.

Basic Input Output System

An instruction program which checks each component during machine boot to adapt the operating system to the hardware environment.

Battery widget

A Genymotion feature that allows to test how your application reacts with different battery charge levels and states of charge.

BIOS

See Basic Input Output System.

C

Cache

A buffer storage where temporary files are stored.

Camera widget

A Genymotion feature that allows to send a video stream from a webcam to the Android system. It aims at testing an Android application that uses an Android built-in camera.

Capture widget

A Genymotion feature that allows to take a screenshot or make a screencast of actions performed on virtual devices.

Central Processing Unit

The functional unit of a computer that consists of one or more processors and their internal storages.

CPU

See Central Processing Unit.

D

Device ID/IMEI/MEID

A device unique identification number which comprises 14 digits or hexadecimal digits and a checksum digit, complying with the GSM 02.16 standard and the 3GPP2 specification. The device ID corresponds to the IMEI number for GSM phones and to the MEID number for CDMA phones.

E

Eclipse

An integrated development environment from which one can develop various types of applications.

F

Flashable archive

A zip-compressed archive file containing a system folder.

G

Genymotion Shell

A command prompt designed to interact with Genymotion virtual devices.

GPS widget

A Genymotion feature that allows real-time activation and modifications of a position, accuracy and bearing of a virtual device.

Gradle

A build engine running on the Java platform.

H

Host-only network

A virtual network contained within the host computer. Host-only network must be enabled when installing VirtualBox for Genymotion to run on your computer.

HTTP proxy

An intermediary component between a local network and the Internet that a HTTP request queries to retrieve information from the web.

I

IDE

See Integrated Development Environment.

Identifiers widget

A Genymotion feature that shows device ID and Android ID numbers and allows to view and edit these values at any time, without having to reboot the virtual device.

Integrated Development Environment

An application from which one can develop applications.

Intel virtualization technology

The Intel processor's hardware ability to divide and isolate its computing capacity for multiple host virtual machines and their operating systems.

Intel VT-x

See Intel virtualization technology.

L

Log file

A file that records all events that occur when using an application.

M

Maven

A build engine running on the Java platform.

Multi-touch

The ability of a device to recognize common gestures allowing to interact with a touch screen.

N

Network widget

A Genymotion feature that allows to test the behavior of an application with different network qualities of service.

O

OpenGL

An application programming interface for rendering 2D and 3D vector graphics.

Oracle VM VirtualBox

A software that virtualizes operating systems by using hardware resources of the host system to install guest systems.

P

Phone widget

A Genymotion feature that allows to test applications relying on telephony features.

Pixel Perfect

A Genymotion feature that enables being highly precise in the development of a user interface: one pixel of a virtual device is displayed using one pixel of the computer screen.

Plugin

A software element that can be added to an existing application to extend its capabilities.

R

Remote control widget

A Genymotion feature that allows to take control of a virtual device from a physical device (any phone or tablet running Froyo/API 8 or greater).

S

Software Development Kit

A set of tools designed for helping developers create applications meant to run on a specific environment.

V

Virtual device

An Android device preconfigured in Genymotion and run by Oracle VM VirtualBox. Genymotion virtual devices are the platforms on which applications are tested.

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